

REMARKS

Page 3 of the application text has been amended as suggested by the Examiner.

Claims 1-22 are presented for examination in the present application. Various ones of these claims, including independent claims 1, 13 and 21, have been rejected over the combination of Evans 5,189,808 and Possati 5,259,121. Reconsideration is respectfully requested.

In general, the present application is directed to a plug gauge for testing the mouth of a container. The gauge includes a spring carried by a support, a rod having one end coupled to the spring, and a gauge plug coupled to the other end of the rod. A control mechanism supports the rod and is coupled to an electric motor. Motion of the control mechanism by the motor lowers the rod and plug into the container mouth under force of the spring, and thereafter lifts the rod and plug out of the container mouth. It is important to note at this point that the electric motor does not drive the plug into the container mouth. Rather, the plug is urged into the container mouth by the spring, with the electric motor operating to permit lowering of the plug under the force of the spring and thereafter to lift the plug away from the container mouth. In the preferred embodiment, the spring takes the form of an air spring. A stripper in the preferred embodiment is operatively coupled to the control mechanism, which supports the rod and is coupled to the electric motor, for lowering against the container mouth as the rod and plug are lowered by the spring, and for holding the container mouth as the rod and plug are lifted from the container mouth by the electric motor.

Turning to the cited art, Evans discloses a manual or hand-operated gauge for measuring the depth of a countersink or the height of a fastener head (column 1, lines 5-9). An LVDT 36 is mounted within a case 31 and is connected by a plunger 86 to a probe 92. A foot 72 is threaded onto the case 31, and a coil spring 100 urges the probe 92 against an opposing shoulder on the foot 72 (column 5, lines 28-38). The foot 72 terminates in a cylindrical contact ring 74 for contacting the workpiece and establishing a reference from which the countersink depth or fastener head height is measured (column 4, lines 37-40). The reference numeral "116" refers to a countersink, the depth of which is being measured in FIG. 1 (column 6, line 2). Thus, the probe in Evans is lowered by hand against a countersink or fastener head to be measured, and the spring 100 serves to bias the probe 92 against the foot 72 and not to lower the probe for measurement purposes. The element 74 is not a "stripper" because the element 74 moves with the overall probe assembly and does not stay against the surface of the workpiece while the probe 92 is removed. Thus, the present invention as claimed is not "substantially disclosed" by the Evans reference, as suggested by the Examiner at page 3, line 1 of the Office Action.

Possati apparently is cited for disclosure of a motor to operate a measuring device. However, in the Possati reference, the plug gauges 11-16 are raised and lowered by pneumatic actuators 90 (column 6, line 68 to column 7, line 4 and column 7, lines 38-43). The element "3" in Possati FIG. 1 is a "motor block" (column 4, lines 1-4), which is the part under test. Possati does not disclose or suggest use of an electric motor for moving the plug gauges 11-16.

Turning now to the claims of the present application, independent claim 1 recites a plug gauge that includes a spring carried by a support, a rod having one end coupled to the spring, and a plug coupled to the other end of the rod. A control mechanism is coupled to an electric motor and supports the rod. Motion of the control mechanism by the electric motor lowers the rod and plug into a container mouth under force of the spring, and thereafter lifts the rod and plug out of the container mouth. Neither of the Evans and Possati references discloses or suggests a plug gauge in which an electric motor supports the rod of a plug gauge, with a plug being inserted into a container mouth under the force of a spring and thereafter lifted out of the container mouth by an electric motor. As noted above, the device in Evans is lowered by hand into the measurement position, whereas the device in Possati is lowered by a pneumatic actuator. Even if one were to suggest for the sake of discussion that it might have been obvious to replace the pneumatic actuator in Possati with an electric motor, and this is by no means conceded or apparent even with the benefit of hindsight, the result still would not be the combination recited in claim 1. It is important that the gauge plug be lowered into the container mouth by the force of a spring and not by the force of an electric motor. If the container mouth were choked, the force of an electric motor (or a pneumatic actuator) might cause jamming or breakage of the container, which in turn can cause interruption of operation of the inspection system (page 1, lines 10-15 of the present application text). Thus, the invention of claim 1 is neither taught by, suggested in or obvious in view of the combination of Evans and Possati.

Independent claim 13 is directed to a plug gauge that includes a support for mounting above a container inspection station, an air spring carried by the support, a rod having one end coupled to the air spring and a gauge plug coupled to the other end of the

rod. A rotary electric motor is mounted on the support, and a crank arm that couples the motor to a rod arm slide carried by the support beneath the motor. A rod arm is carried by the rod arm slide and engages a stop on the rod to support the rod and the plug, and is movable away from the stop when the plug engages a container mouth. A stripper is mounted on the support beneath the rod arm slide and is operatively coupled to the rod arm slide for lowering against a container mouth to hold the container in position as the rod and plug are lifted from the container mouth.

Neither Evans nor Possati even remotely suggests use of a rotary electric motor mounted on a support, a rod arm slide carried on the support beneath the motor, or a crank arm coupling the motor to the rod arm slide. Furthermore, attention is directed to the lost motion recited in claim 13, in which the rod arm supports the rod and the plug by engagement with the stop and is movable away from the stop when the plug engages a container mouth. There is nothing even remotely similar in Evans or Possati. The stripper of claim 13 is coupled to the rod arm slide and remains in engagement with the container mouth after the plug is lifted from the container mouth, which provides the stripping action - i.e., "stripping" the plug from the mouth in the event that the plug is tightly caught in the container mouth. As noted above, the contact ring 74 in Evans moves with the case 31, and therefore cannot perform any "stripping" function.

As to both independent claims 1 and 13, it is axiomatic that, to support a rejection on the basis of obviousness, it is necessary that the references teach, suggest or provide incentive to combine elements from various references to obtain the invention. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ 2d 1434 (Fed. Cir. 1988); *In re Geiger*, 815 F.2d 686 (Fed. Cir. 1987); *Ex parte Clapp*, 227 USPQ 972 (POBA 1985).

This is particularly true, of course, where the elements of the references would be required to coact with each other in a manner different from the way they coact in the reference disclosures, or where the key or distinguishing element of the claims is completely lacking in the references.

[I]n order to meet the terms of the claims on appeal, the elements of the [prior art] device would have to be arranged in a manner different from that disclosed by [the art]. The elements of the reference would also be required to coact differently from the way they coact in the arrangement disclosed by the reference. The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide motivation or reason for the worker in the art, without the benefit of applicant's specification, to make the necessary changes in the reference device.

Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (POBA 1984). See also *Fromsom v. Advanced Offset Plate, Inc.*, 755 F.2d 1549, 225 USPQ 26 (CAFC 1985); *In re Sernaker*, 702 F.2d 989, 217 USPQ 1 (CAFC 1983) and *Ex parte Stauber*, 208 USPQ 945, 946 (POBA 1980).

Simply stated:

It is wrong to use the [application] as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit. Monday morning quarterbacking is quite improper when resolving the question of non-obviousness in a court of law.

Orthopaedic Equipment Co., Inc. v. U.S., 702 F.2d 1005, 217 USPQ 193, 199 (Fed. Cir. 1983).

When the incentive to combine the teachings of the references is not readily apparent, it is the duty of the Examiner to explain why combination of the reference teachings is proper.

Ex parte Skinner, 2 USPQ 2d 1788, 1790 (BPAI 1987). This the Examiner has not done in the present application. It is respectfully submitted that there is no basis for rejection of independent claims 1 and 13 (or claim 21) over the combination of Evans and Possati, even with the impermissible benefit of hindsight.

Independent claim 21 is directed to a method of inspecting the inside diameter of a container mouth. A plug is coupled by a rod to an air spring, and a motor is coupled to the rod by a rod arm. The motor is operated to lower the rod arm such that the plug enters a container mouth "under force of the air spring." A diameter characteristic of the container mouth is determined as a function of penetration of the plug into the container mouth, and the motor is then operated to lift the rod arm and the plug out of the container mouth. Claim 21 clearly is allowable over the combination of Evans and Possati for reasons discussed above in connection with claims 1 and 13. Dependent claim 22 additionally recites lowering a stripper into engagement with the container mouth to hold the container mouth in position while the motor lifts the rod arm and plug out of the container mouth. The stripper is lifted out of engagement with the container mouth after the plug has cleared the container mouth. As noted above, the contact ring 74 in Evans cannot operate in any manner analogous to this claim recitation because the contact ring is part of the case 31 and moves with the case.

Dependent claims 2-12 and 14-20 are allowable both by reason of dependency from claims 1 and 13 discussed in detail above, and because of the additional novel limitations set forth therein.

It is therefore believed and respectfully submitted that all claims 1-22 remaining in the application are allowable at this time, and favorable action is respectfully solicited.

Please charge any fees associated with this submission to Account No. 15-0875 (Owens-Illinois).

Respectfully submitted,

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